CLAIMS:

What is claimed is:

1. An apparatus for preserving an organ via perfusion, comprising:

a housing;

an organ-receiving container arranged in said housing and optionally containing a medium compatible for preserving the organ, said container having an opening;

a connector detachably mating with said container to alternately enable access to an interior of said container through said opening and seal said opening;

a gas source arranged in said housing;

means for directing gas from said gas source into said container; and

means for removing medium from said container and recirculating said medium into the organ.

2. The apparatus of claim 1, wherein said container is separable from said housing.

3. The apparatus of claim 1, wherein said means for directing gas from said gas source into said container comprises a first conduit leading from said gas source to a hose barb formed in connection with said container and a second conduit leading from said hose barb into an interior of said container.

4. The apparatus of claim 3, further comprising a filter arranged in connection with said first conduit for filtering the gas from said gas source.

5. The apparatus of claim 4, further comprising a gas release mechanism arranged at an end of said second conduit.

6. The apparatus of claim 1, wherein the medium is VIASPAN™.

7. The apparatus of claim 1, wherein said means for removing medium from said container and recirculating said medium into the organ comprises a pump, a first and a second hose barb formed in connection with said container, an intake conduit arranged in said container and connected to said first hose barb, a pump conduit connected at one end to said first hose barb and at an opposite end to said second hose barb, and an organ supply conduit arranged in said container and connected to said second hose barb, said organ supply conduit being adapted to be attached to the organ, said pump conduit being engaged with said pump to enable said pump to cause flow of medium from said intake conduit through said pump conduit to said organ supply conduit.

8. The apparatus of claim 7, wherein an inlet end of said intake conduit is weighted so as to be situated below a level of medium in said container.

9. The apparatus of claim 1, wherein said housing comprises a mounting structure for receiving said container and said gas source.

10. The apparatus of claim 1, wherein said container comprises a vent for venting gas from said container.

11. The apparatus of claim 1, wherein said container includes a connector part defining said opening.

12. The apparatus of claim 11, wherein said connector and said connector part of said container include a cooperating sealing mechanism.

13. The apparatus of claim 12, further comprising a gasket interposed between said connector and said connector part of said container.

14. The apparatus of claim 1, wherein said gas source comprises a gas cylinder.

15. The apparatus of claim 1, wherein said connector is a bung having a first passage and a second passage, said means for directing gas from said gas source into said container being arranged to direct the gas through said first passage and said means for removing medium from said container and recirculating said medium into the organ being arranged to direct the medium through said second passage.

16. The apparatus of claim 15, wherein said bung includes a first pipe defining said first passage and a second pipe defining said second passage, an upper end of said first and second pipes being arranged on one side of said bung and a lower end of said first and second pipes being arranged on an opposite side of said bung.

17. The apparatus of claim 15, wherein said means for directing gas from said gas source through said first passage and into said container comprises a first conduit leading from said gas source to said first passage and a second conduit arranged in an interior of said container in flow communication with said first conduit.

18. The apparatus of claim 15, wherein said means for removing medium from said container and recirculating said medium into the organ through said second passage comprises a pump, an intake conduit arranged in said container, an outlet conduit connected to said intake conduit and having an end exterior of said container, a pump intake conduit arranged between said outlet conduit and said pump, a pump outlet conduit arranged between said pump and said second passage and an organ supply conduit adapted to be arranged between

said second passage and the organ.

19. An apparatus for preserving an organ, comprising:

a housing;

an organ-receiving container arranged in said housing and optionally containing a medium compatible for preserving the organ;

a gas source arranged in said housing;

gas directing means for directing gas from said gas source into said container; and

medium recirculating means for removing medium from said container and recirculating said medium into the organ,

said gas directing means and medium recirculating means being arranged such that the gas and the medium flow separately into said container.

20. The apparatus of claim 19, wherein said gas directing means comprise a first conduit leading from said gas source to a hose barb formed in connection with said container and a second conduit connected to said hose barb in an interior of said container.

21. The apparatus of claim 20, wherein said medium recirculating means comprise a pump, a first and a second hose barb formed in connection with said container, an intake conduit arranged in said container and connected to said first hose barb, a pump conduit connected at one end to said first hose barb and at an opposite end to said second hose barb and an organ supply conduit arranged in said container and connected to said second hose barb, said organ supply conduit being adapted to be attached to the organ, said pump conduit being engaged with said pump to enable said pump to cause flow of medium from said intake conduit through said pump conduit to said organ supply conduit.

22. The apparatus of claim 19, further comprising a connector removably connected to said chamber, said connector having a first passage and a second passage separated from said first passage, said gas directing means being arranged to direct the gas through said first passage and said medium recirculating means being arranged to direct to the medium through said second passage.

23. The apparatus of claim 22, wherein said connector includes a first pipe defining said first passage and a second pipe defining said second passage, an upper end of said first and second pipes being arranged on one side of said bung and a lower end of said first and second pipes being arranged on an opposite side of said bung.

24. The apparatus of claim 23, wherein said gas directing means comprise a first conduit leading from said gas source to said first passage, a gas release mechanism and a second conduit arranged in an interior of said container and leading from said first passage to said gas release mechanism.

25. The apparatus of claim 24, wherein said medium recirculating means comprise a pump, an intake conduit arranged in said container, an outlet conduit connected to said intake conduit and having an end exterior of said container, a pump intake conduit arranged between said outlet conduit and said pump, a pump outlet conduit arranged between said pump and said second passage and an organ supply conduit adapted to be arranged between said second passage and the organ.

26. The apparatus of claim 19, wherein said container is separable from said housing.

27. The apparatus of claim 19, wherein said container is a bio-

containment bag made of flexible material.

28. A bio-containment device for use in organ preservation, comprising:

a film forming a receptacle having a main opening and three flow openings;

a connector part surrounding said main opening;

a connector detachably mating with said connector part to alternately enable access to said receptacle and seal said receptacle;

three hose barbs each arranged in connection with a respective one of said flow openings;

a gas conduit connected to a first one of said hose barbs for enabling a flow of gas to be introduced into said receptacle;

an organ supply conduit attached to a second one of said hose barbs for enabling a flow of perfusion medium to be directed to an organ when attached to said organ supply conduit; and

a medium intake conduit attached to a third one of said hose barbs for enabling medium to be drawn from said receptacle for recirculation.

29. The bio-containment device of claim 28, further comprising a medium arranged in said receptacle.

30. A bio-containment device for use in organ preservation, comprising:

a film forming a receptacle having a main opening and one flow opening;

a connector part surrounding said main opening;

a bung detachably mating with said connector part to alternately enable access to said receptacle and seal said receptacle, said bung defining a first passage and a second passage;

a hose barb arranged in connection with said flow opening;

a gas conduit attached to said first passage for enabling a flow of gas to be introduced into said receptacle;

an organ supply conduit attached to said second passage for enabling a flow of a perfusion medium to be directed to an organ when attached to said organ supply conduit; and

a medium intake conduit attached to said hose barb for enabling medium to be drawn from said receptacle for recirculation.

31. A method for enabling preservation and transportation of organs, comprising the steps of:

providing a plurality of organ-receiving containers, each containing a medium compatible for preserving the organ;

for each organ to be preserved,

placing a respective one of the containers into a housing;

removing a bung out of connection with the container to expose an opening in the container;

attaching an artery of the organ to a conduit leading to a first pipe in the bung and placing the organ in the container;

connecting a gas release device to a second pipe in the bung;

connecting the bung to the container to seal the container with the organ inside;

removing medium from the container and recirculating the medium into the organ through the first pipe; and

directing gas from a gas source arranged in the housing through the second pipe in the bung into the medium in the container.